

1 Amendment to Drawings

- 2 1. Reference numerals 22 and 23 are added to pre-existing
3 Drawing 4 (Replacement Drawing Sheet showing "Fig 4" is
4 attached hereto). The score lines being identified by the
5 new reference numerals were present in the original drawing
6 and only the reference numerals (*i.e.*, and no new matter or
7 items) are being added.
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The Examiner rejected all original claims as obvious and therefore unpatentable. The examiner asserted that Claims 15, 17-21 and 30-34 were unpatentable over Weiss in view of Brooke (1,996,950). Weiss discloses a paperboard child toilet seat adapter with a box-like fold down flap along the front edge and a box-like fold up flap along the rear edge. Brooke disclosed a sanitary paper liner for covering the toilet seat, with a front flap tucked under the seat, between the seat and toilet bowl rim, to prevent the liner from shifting as the user assumes a sitting position upon it. The examiner asserted that it would have been obvious to combine Brooke's use of a tuck-under front flap with Weiss's paperboard seat. The examiner also asserted that Claims 1-14, 16 and 29 were unpatentable over Weiss in view of the design patent Crossley (D346,206). Crossley was a design for a molded plastic child toilet seat adapter which had handles. Here the examiner asserts that it would have been obvious to combine Crossley with Weiss by putting handles on Weiss's paperboard seat. The examiner is satisfied that his assertions constitute a prima facie case for obviousness as required by law. For the following reasons, I disagree.

Although persons may reach different conclusions as to whether an invention is "obvious," the matter is not one where mere opinion carries the day. Instead, and although we question whether the standard of "obviousness" is capable of adequately objective inquiry and reasonably consistent application, the cases are reasonably clear that whether an invention is "non-obvious" must rest upon and be supported by specific inquiries. The law does not support arbitrary

1 rejections. Specifically, one must inquire into what is relevant
2 prior art, and what is taught in such art(s). These inquiries
3 themselves are not obvious in their content or their application and
4 so the two inquiries are also not matters of opinion and must be
5 addressed in accordance with defined legal principles.

6
7 For purposes of reference, chronological, side-by-side listings
8 of references to both adult hygienic liner technology and foldable,
9 weight-bearing child toilet seat adaptor technology is set forth in
10 Appendix A.

11
12 The relevant Prior Art

13
14 Neither the Paper-based liners nor the design patent for a molded
15 plastic toilet seat adaptor are analogous arts.

16 The examiner has assumed that inventions relating to the use of
17 thin paper liners to provide a hygienic barrier for adults using
18 public toilets is analogous to toilet adaptors for children made from
19 firm materials. That assumption is erroneous.

20
21 "The test as to whether two references are from non-analogous
22 arts is whether one seeking to solve a problem with respect to the
23 embodiment of a reference in one art would be apt to seek the solution
24 to said problem in the other art." In re Shapleigh, 248 F.2d 96, 102
25 (CCPA 1957).

26
27 There are various approaches to determining the "relevant art"
28 found in both treatises and cases. One way is to look at the

1 product's function; another way is to look at the problem to be
2 solved; yet another way is to look at the scientific field involved in
3 the solution. Under all of these approaches, neither the thin paper
4 liner (Brooke) nor the molded toilet adaptor (Crossley) is a source to
5 which one making the instant invention would be expected to turn for
6 guidance.

8 **Product Function Analysis**

9 The function of the invention generally and those in the art
10 before it is to provide a *portable* means to securely seat a small
11 child on an adult-size toilet seat which, being designed for adults,
12 has an opening too large to comfortably accommodate the child. It
13 must bridge the gap, be capable of bearing the child's weight, and
14 remain secure while a potentially fidgeting child is seated thereon.
15 It is a further function of the current invention to meet the
16 foregoing portability objective while being constructed from a single
17 piece of foldable material, which can thus be folded into a smaller
18 and more easily carried package. While it is also a purpose of the
19 invention and its predecessors to provide a clean surface, such
20 function is not significant in the analysis, as any material and any
21 means used to construct the adaptor would satisfy that purpose, and
22 nothing further inventive must be done. Additional issues addressed
23 by the handles are discussed below.

24
25 The function of the invention of Brooke is solely (as is relevant
26 here) to provide a clean barrier for an adult sitting on a toilet.
27 The thin paper barrier of Brooke could not be used as an adaptor for
28 seating a child as it has no weight-bearing capacity at all.

1
2 For the child seat, weight-bearing capacity can be achieved
3 either by using a material which is sufficiently firm and strong by
4 its inherent nature, as most of the patents in the field do, or by
5 using a flexible material which can nevertheless support weight when
6 its surface is put under tension. Liners such as in Brooke provide no
7 insight in a weight-bearing context under either approach.
8

9 Crossley does not disclose any invention at all, but a design for
10 a non-portable, molded plastic toilet adaptor.
11

12 **Problem Solved Analysis**

13 The problem to be solved by the front, fold-under flap in the
14 present invention is to keep the seat secure while the child is seated
15 upon it. In this context, the "security" is primarily the prevention
16 from lateral or rotational shifting of the adaptor, so that both of
17 its rear corner edges remain on the seat where they can transfer the
18 force of the child's weight. A child will generally be lifted up and
19 placed upon the adaptor by an accompanying adult, and there is little
20 concern over the adaptor shifting during that process. Further, the
21 preferred material, corrugated paperboard, is of such weight and
22 firmness that airflow resulting from local movement, such as is apt to
23 displace a thin paper liner during the process of an adult sitting,
24 would not be sufficient to disturb the position of the current
25 invention even in the absence of a fold-under flap. To the extent
26 there is such concern, a fold-under flap adds little more than a fold-
27 down only flap, which several prior inventions utilize. Similarly,
28 the child will sit with his or her legs over the front of the adaptor

1 and toilet seat, so there is little concern over the adaptor unduly
2 shifting forward or backward. In Brooke, the problem to be solved by
3 the flap is to keep the liner in place during the act of sitting,
4 which, as stated, is not a concern in the present invention. An adult
5 using a liner would not have concerns over the placement of the liner
6 once seated, as his or her weight would keep the liner in place and,
7 in any event, shifting of the user would cause the paper liner to tear
8 and would not be retained in place by the flap. Thus, the flap in
9 Brooke does not and could not solve the same problem presented in the
10 current invention and therefore would not be a likely source of
11 reference.

12
13 This test is not particularly informative for handles, as the
14 concept of handles is not new; but the analysis is presented in the
15 interest of keeping the analysis complete. The problems to be solved
16 by handles in the current invention are: (a) to occupy child's hands
17 to keep them from touching contaminated surfaces in public restrooms;
18 (b) to give the child something to hold so they feel more secure and
19 are, perhaps, amused; and (c) to provide a means for an accompanying
20 adult to remove the adaptor without touching toilet surfaces. As a
21 design only, Crossley does not disclose the purpose for its handles or
22 whether they address any particular problem or issue at all. Although
23 the Crossley handles could arguably address the purpose set forth in
24 (b) and/or (c), as a non-portable adaptor, the Crossley design would
25 be used in a familiar and controllable environment and would not
26 address the concerns in (a).

1 **Applicable Scientific or Technical Field Approach**

2 Under the third approach, we look at the scientific or technical
3 field involved. In the current invention, the field is that dealing
4 with the use and manipulation properties of firm, weight-bearing
5 capable, but foldable, materials, such as corrugated paperboard.
6 Brooke involved the use of thin paper, which he shows wrapped around
7 the front of the toilet seat in the same manner as one would wrap
8 cloth or other highly flexible material. The manipulation of highly
9 flexible materials such as paper would not serve as a source of
10 reference for the manipulation of firm materials, which cannot be
11 draped around objects as they are found. Firm materials must
12 anticipate the precise manner of fit in advance, so that cuts, scores
13 and folds can be predetermined and incorporated. Similarly, Crossley
14 involved a design for an adaptor made of molded plastic, a process
15 that has virtually nothing in common with manipulating sheets of firm
16 but foldable paperboard.

17
18 Even where there is similarity in structure between two arts, if
19 the basic problem to be solved has significant differences, one will
20 not be presumed to serve as a reference for the other. For example,
21 in Stevenson v. International Trade Comm., 612 F.2d 546, 204 USPQ 276
22 (CCPA 1979), the court said:

23 "There is similarity in structure, with the waterski, the
24 surfboard, and the kicktail deck all having an unruptured aft
25 plane. However, the problem of maneuvering a wheeled vehicle
26 across a hard surface would appear to differ significantly from
27 the problem of maneuvering a surfboard or waterski through the
28 water, a fluid medium. Therefore... one of ordinary skill in the

1 art of designing skateboards would not have turned to these
2 patents for guidance on a problem of maneuverability of a
3 wheeled vehicle."

4
5 The issue presented by the examiner in the current invention is
6 analogous to Stevenson, supra. There is a significant difference
7 between the problem of creating a weight-bearing adaptor and those of
8 both creating a non-weight-bearing liner and creating a molded plastic
9 seat. The liner and molded arts are not analogous.

10
11 The fact that both paper liners and child adaptors are used with
12 toilets does not make the arts analogous.

13 The fact that paper liners and child adaptors are both used with
14 toilet seats does not make them analogous arts. In In re Clay, 966
15 F.2d 656, 659, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992), the court
16 addressed a patent office rejection based on prior art, finding
17 distinctions in the prior reference notwithstanding that both related
18 to the same industry. The court there said:

19
20 "[the reference] cannot be considered to be within [the
21 inventor's] field of invention merely because both relate to the
22 petroleum industry... [the reference] teaches the use of a gel in
23 unconfined and irregular volumes within generally underground
24 natural oil bearing formations to channel flow in a desired
25 direction; [the inventor] teaches the introduction of gel to the
26 confined dead volume of a man-made storage tank. The
27 [reference] process operates in extreme conditions, with
28 petroleum formation temperatures as high as 115 degrees C and at

1 significant well bore pressures; [the inventor's] process
2 apparently operates at ambient temperature and atmospheric
3 pressure. [The inventor's] field of endeavor is the storage of
4 refined liquid hydrocarbons. The field of endeavor of [the
5 reference] invention, on the other hand, is the extraction of
6 crude petroleum."

7
8 Similarly, adaptors which are appropriate mainly for single site
9 use, either because they attach in some manner to the toilet or seat,
10 or because they do not collapse or fold into an area significantly
11 more compact than their "in use" state, are not an analogous art.
12 Such adaptors need not be simple, light, disposable, made of a single
13 sheet of material, or otherwise need to alter their dimension or
14 shape. In fact, they are, by design, not disposable. See, e.g.,
15 Zuckerman (1,950,016), Rasmussen (2,255,272), Merry (6,449,780). This
16 group faces none of the engineering challenges faced in portable potty
17 seats and have manufacturing alternatives not available to the current
18 invention and its peers. Crossley belongs to the class of toilet
19 seats designed for use at a single location.

20
21 The Examiner's Arguments that it was "obvious" to combine Weiss and
22 Brooke (for front flaps) and Weiss and Crossley (for handles) is not
supported by historical fact.

23 According to the historical and revision notes to 35 U.S.C. §103,
24 "the refusal of patents by the Patent Office, and the holding of
25 patents invalid by the courts, on the ground of lack of invention or
26 lack of patentable novelty has been followed since at least as early
27 as 1850." Thus, the concept of "non-obviousness" which the examiner
28 asserts is not new and has been applied historically.

1
2 Weiss was not the first to use a firm foldable material such as
3 corrugated paperboard. Cardboard was suggested in 1951 by
4 Potts/LaRoche. Similarly, a fold-under flap in paper liners was used
5 by Hopkinson in 1912. Thus, if the combination from the two arts is
6 obvious, it has been so since at least 1951. Nevertheless, between
7 the times of Hopkinson and Brooke, fold-under flaps were employed in
8 two other liner-based inventions: Metcalf (1,402,307) and Marks
9 (1,582,527), both in 1922. Neither was denied as obvious in light of
10 Hopkinson; nor was Brooke. Since 1951, there have been at least 7
11 child toilet adaptor patents granted, none of which employed a fold-
12 under flap or disclosed such a flap as an alternative embodiment.
13

14 Brooke, and for that matter Hopkinson, did not teach folding
15 under. Folding under has been around for at least as long as people
16 have been using blankets and tucking the edges under a mattress or
17 other bedding. Hopkinson first employed the same technique in paper
18 toilet liners. The simple recognition that a thin paper sheet can be
19 manipulated like fabric would lead one in that direction. There is no
20 evidence in the historical record that adapting a similar manipulation
21 to a firm foldable surface would be an obvious transition.
22

23 Finally, to incorporate a fold-under flap in Weiss, is essentially
24 to ignore Weiss. Once one substitutes a fold-under flap for Weiss's
25 downward box-like front end, he has removed Weiss's innovation
26 (assuming that there was anything new in Weiss at all, which is
27 discussed below) and gone in an entirely different direction. That is
28 no more obvious after Weiss than before it. The firm cardboard seat

1 with folds along the rear edge were disclosed in Potts/LaRoche. Weiss
2 offers nothing to the current invention.

3
4 Similarly, handles are not new and they were not new when Crossley
5 used them on a molded plastic toilet seat adaptor. Crossley teaches
6 absolutely nothing useful in adapting handles to an adaptor made of a
7 single sheet of foldable material.

8
9 The examiner's assertion that handles are "obviously" adapted to
10 or combined with Weiss is superficial. The fold-up sides of Weiss are
11 too far rearward to provide handles useful to a child facing forward.
12 The fold-down flaps along the forward portion of the sides are folded
13 down, opposite to the direction handles must go. Although one might
14 suggest that a handle might be made to project from the small space
15 between the two side flaps in Weiss, such a handle would be
16 functionally useless, as it would have only one point of connection
17 with the seat and would therefore provide no stability and be inclined
18 to rip along its score line. Although one might conceive of a way to
19 force handles onto Weiss, such is neither obvious nor practical.

20
21 Again, to accomplish that which the examiner asserts is obvious,
22 one must abandon the functional aspects of Weiss for a totally new
23 invention; and nothing supports a conclusion that to do so would be
24 obvious.

25
26 **No motivation to combine has been shown by the examiner**

27 In concluding that it would be obvious to combine Weiss with
28 Brooke (for the fold-under flap) and Weiss with Crossley (for

handles), the examiner is relying solely on his own opinion and judgment; he does not cite any reason for referring to those patents, which are not cited in any of the other agreeably relevant patents or legal standards of "non-obviousness" in the patent context. The only basis disclosed for the examiner's conclusion was his opinion of the structural similarity.

If Brooke and Crossley were relevant prior art references for portable child toilet seat adaptors, they would have been cited in prior patents for similar devices, such as Weiss, Potts, Alexander, etc., and particularly Weiss, which the same examiner approved. They aren't cited by any of the clearly relevant prior art patents. Why is it that they were not relevant prior art before, as in Weiss, but have become so now? The only explanation for their reference in this invention and not in the context of Weiss is that the examiner used the instant invention as a reference and specifically sought art with similar structural features—a methodology specifically disapproved by the law.

The theoretical ability to combine parts is not enough. There must be "some motivation or suggestion to combine the references in prior art taken as a whole." In re Beattie, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed Cir. 1992). That knowledge cannot come from the applicant's invention. In re Oetiker, 977 F.2d 1443, 1447, 24 USPQ2d 1443, 1446 (Fed. Cir. 1992).

1 The examiner failed to address why references cited constitute
2 relevant art, what each teaches, or what exists in the prior art which
3 would suggest the combination of the various elements found.

4
5 He merely points to structurally similar components and asserts
6 that their combination is obvious. This is directly in conflict with
7 patent law. "Prior art may not be gathered with the claimed invention
8 in mind." Pentec v. Graphic Controls, 776 F.2d 309, 227 USPQ 766 (Fed
9 Cir. 1985).

10
11 "[D]ecomposing an invention into its constituent elements,
12 finding each element in prior art and then claiming that it is easy to
13 reassemble these elements into the invention, is a forbidden ex post
14 analysis." In re Mahurkar Patent Litigation, 831 F.Supp 1354, ___, 28
15 USPQ2d 1801, ___ (N.D. Ill. 1993). See also, Interconnect Planning
16 Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir.
17 1985), In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed.
18 Cir. 1992).

19
20 An Historical Analysis demonstrates that the examiner's application of
21 a "non-obvious" standard is flawed.

22 If the examiner's analytical approach were valid and consistent
23 with the patent law, one would expect that it would apply
24 retrospectively and consistently to the body of patents claimed
25 analogous. Looking back on the evolution of patents in the two arts,
26 it becomes clear that the examiner's approach does not so apply.
27 There are two possible reasons for that result. One is that the
28 analytical approach utilized by the examiner in the instant patent

1 application is flawed either in foundation or in its specific
2 application here. The other is that the nature of the non-obvious
3 requirement is so incapable of objective and consistent application as
4 to suggest its own invalidity as inherently denying equal protection
5 to patent applicants. As a lay person in the patent world, I am
6 inclined to believe that both are true. In any event, I will address
7 the result rather than the reason, as either reason militates against
8 rejection of the instant application.

9
10 Using the Examiners reasoning, the following represent some of the
11 most obvious inconsistencies:

- 12 1. Weiss would not be allowed in light of Reid (downward, box-like
13 front and side folds), Potts (upward, box-like, rear and side
14 folds), and Alexander (stability from wedging toilet seat into
15 downward front and side folds of cover).
- 16 2. Greenwood would not be allowed in light of Becker (folding cover
17 in 4 sections, 3 hinges), Dahle, Breher and Fox.
- 18 3. Montaldo would not be allowed in light of Schrader.
- 19 4. Hamilton would not be allowed in light of Oakes (adapting weight-
20 bearing surface) Young (front flap), and Becker (securing clips).
- 21 5. Assuming Hamilton was nevertheless allowed, Hawkins would not be
22 allowed in light of Hamilton (using a flexible material over the
23 front half of the toilet seat to adapt a child) and Marks
24 (securing a flexible material by folding the same around the
25 edges of the toilet seat).
- 26 6. Brooke would not be allowed in light of Hopkinson (front flap
27 folded under front of toilet seat).

1 7. Reeves would not be allowed in light of Young (both internal lip
2 and rear flap).
3

4 That all of the foregoing patents were granted further suggests that
5 the examiner's approach cannot be correct.
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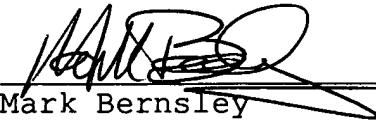
7 CONCLUSION

8 For the foregoing reasons, the examiner's conclusion that the
9 instant invention is obvious is not well taken and the patent
10 application ought be allowed.

11 An opportunity for an interview is requested before any adverse
12 action is taken hereon.
13

14 Respectfully submitted

15
16 Date: 4/1/05


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8 APPENDIX 1
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HYGIENIC LINER TECHNOLOGY FOR ADULTS	FOLDABLE AND/OR CARDBOARD WEIGHT-BEARING CHILD ADAPTOR TECHNOLOGY
1866- Sondheim (52,581): a 1 or 2-piece-hinged hard water closet seat cover.	
1885- Fox (310,401): 4-piece rectangular hard folding seat.	
1889- Tittmann (406,604): 2-piece hard folding seat with legs.	1889- Breher (396,803): 4-piece ring-shaped adjustable seat protector which size-adjusts to support either adult or child.
1889- Tittmann (417,606):	
1893- Prins (496,536): 2 half cylinders hinged to fold into a seat with a carrier bag.	
1903- Franken (747,960): a firm seat made from a series of segments which collapse into each other for carrying.	
1912- Hopkinson (1,036,623): a paper-based membrane/liner used for covering the toilet seat, with a forward extension that folded under the front of the seat.	1912- Parker (1,015,741): a 2-piece hinged seat ring for water closet use. It states an object for use by adults or children, although it is not clear in the implementation of that intention.
	1917- Bach (1,233,263): a firm flat seating surface with smaller central opening held over and above the toilet seat by feet which hooked onto the inside of the toilet seat, and containing a wire frame around the sides and back forming arms and backrest.
	1920- Delaney (1,334,137): smaller toilet seat with buffer stays.
	1920- Oakes (1,348,372): a simple, 2-piece, laterally hinged, semi-rigid board resting over the toilet with a smaller sized opening. It included straps for securing it to the toilet seat. It was contemplated as a re-usable device.

1	1921- Young (1,377,541): a paper-based	
2	membrane/liner which contained a front	
3	flap resting outside the toilet and an	
4	internal flap resting inside the forward	
5	edge of the toilet and liner opening,	
6	thereby holding the liner in place.	
7		
8	1922- Metcalf (1,402,307): a paper cover	
9	of triangular shape, wherein the corners	
10	are folded under the toilet seat.	
11		
12	1922- Reid (1,522,699): a paper-based	
13	membrane/liner which contained front and	
14	side flaps (flanges) folded down to form	
15	a box-like cover over the front face and	
16	side faces of toilet seat.	
17		
18	1922- Marks (1,582,527): a paper-based	
19	membrane/liner which contained side	
20	extensions to fold under the side of the	
21	seat.	
22		
23	1926- Becker (1,592,597): a cardboard	
24	ring covering the toilet seat,	
25	subdivided into 4 sections for folding	
26	by 3 hinged divisions. The cover is	
27	secured by spring clips fitting around	
28	the underside of the sides of the toilet	
	seat.	
	1927- DeLuna (1,635,072): a paper or	1927- Noble (1,633,222): an 8-part hard
	cardboard ring covering the toilet seat,	material adult or child toilet seat
	with internal flaps and secured by clips	forming a ring via 4 hinges and 4 tongue
	at the "corners."	and groove joints.
	1927- Mahoney (1,643,413): a continuous	
	sectional ring cover formed by stitching	
	an upper fabric layer and a lower	
	waterproof layer, with sectional pockets	
	into which are inserted stiffer material	
	such as cardboard, thereby providing a	
	comfortable surface which can be removed	
	and folded for carriage.	
	1928- Engalitcheff (1,673,622): a paper	
	cover which, when set for use, has a	
	center portion which extends down into	

1 the bowl to prevent splashing from solid
2 waste and which enables the cover to be
3 drawn into the bowl and washed out
4 during flushing.

1929- Hamilton (1,733,080): a flexible,
but durable liner, such as rubber,
extended across the forward half of the
toilet seat and secured by hooks/clips at
the front and side to secure and provide
tension to the membrane, and containing a
front flap.

1929- Hawkins (1,710,620): a flexible,
but durable membrane, such as fabric,
covering the top of the toilet seat with
the fabric membrane extended to form a
flange that wrapped around the edges of
the seat and was held in place by tension
derived from a strap and buckle. The
tension on the membrane provided support
for the child.

14 1930- Oates (1,776,333): paper liner
15 with central portions which tear leaving
16 a strip hanging into interior side of
17 bowl, so that flushing water will pull
it in and dispose of the line during
flushing.

18 1935- Brooke (1,996,950): paper-based
19 membrane/liner used for covering the
20 toilet seat, with a forward extension
that folded under the front of the seat.

21 1941- Richardi (2,260,404): used a firm
22 paperboard material as a "simpler"
23 membrane/liner technology which required
special adaptation of the toilet seat to
accept the replaceable liners.

24 1943- Reeves (2,312,589): a paper or
25 other cellulosic material ring
26 membrane/liner having a lip extending
27 into the bowl from the front inside
28 portion of the surface and a rear flap
extending up.

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1944 (filed)- Dahle (2,443,068): a folding adaptor seat, subdivided into 4 sections for folding by 3 hinged divisions.

1947- Richards (2,457,726): a hinged toilet seat made of firm material such as wood or plastic, subdivided into 4 sections for folding by 4 hinged divisions. Although the patent does not indicate its fit over adult-sized seats, it does suggest that it is "particularly advantageous for infants and small children," suggesting that application.

1951- Anderson (2,537,504): a hinged two-piece hard surface folding child adaptor which attaches to and becomes the handles for a carrying bag for other articles.

1951- Potts/LaRoche (2,548,238): uses firm paperboard (or corrugated paper) made from a single blank as a weight-bearing adaptor for child use of adult-sized toilets. Vertical rear and side extensions are used and folded into place in a manner disclosed for knockdown paper boxes in Craw (564,594). A front flap extension is also provided, as is a strap for securing the adaptor to the toilet.

1953- Mohun (2,742,650): an adaptor comprised of upper and a lower layers of plastic sheeting, with sectional pockets into which are inserted stiffer material, thereby providing a firm surface which can be removed and folded for carriage. Longitudinal support is provided by the engagement of interlocking members which, when engage, prevent folding along the longitudinal axis.

1955- Wendel (2,716,244): a cardboard blank as a disposable adaptor. It included a short front fold without sides. It did include additional folds at the rear corners to inhibit both

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1985- Bass (4,525,880): a thin shell that fits over the toilet seat having a stack of internal paper liners to prevent direct contact between the shell and the toilet seat, one of which liners can be removed and disposed of after each use.

lateral and forward movement of the blank, and use of the cutout center as a forward splash guard.

1957- Schrader (2,888,686): a woven fabric sleeve fits over the conventional toilet seat, providing a smaller opening, and is secured by lateral straps under and to the rear of the seat.

1958- Alexander (2,825,070): a "triangular" (with the front corner cut off) cardboard or corrugated version with sides angled from a wider back to a narrower front, and folded edges which wedge the front and front portion of the sides of the toilet between the front and side folded flanges of the seat.

1967- Montaldo (3,316,560): a pliable plasticine envelope completely surrounding the top, bottom, front and sides of the toilet seat (open only in the rear to allow it to slip over the seta), with central cutouts in the top and bottom sheets, with rear snaps to close the envelope.

1991- Greenwood (5,005,223): a folding adaptor seat, made of plastic, subdivided into 4 sections for folding by 3 hinged divisions.

2002- Weiss (6,473,911): uses firm paperboard (or corrugated paper) made from a single blank as a weight-bearing adaptor for child use of adult-sized toilets. Upward rear and side extensions

are used and folded into place in a manner disclosed for knockdown paper boxes in Craw (564,594). Downward front and side extensions are used and folded down to form a box-like cover over the front face and side faces of toilet seat.